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Introduction to the Journal of Man.

AS the JOURNAL OF MAN is designed to occupy the highest realm of knowledge attainable by man, it cannot be a magazine for the millions who have no aspiration toward such knowledge. Its pages will not be devoted to the elementary lessons that such persons need to attract them to the science of the soul and the brain, and the philosophy of reform. They must be given to the illustration of science that is essentially new which would be instructive to those who already have some elementary knowledge of the subject. That knowledge which readers of the Journal will be presumed to have is briefly presented in the following sketch of

THE SCIENCE OF ANTHROPOLOGY.

1. The brain is the seat of conscious life, the organs of all the powers of the soul, the controlling organ of the body in all its functions, and is therefore a psycho-physiological apparatus, psychic in relation to the soul, physiological in relation to the body.

2. The anatomy of the brain, which is wonderfully complex, was first rationally explored and understood by Dr. Gall, the greatest philosopher of the eighteenth century. The first and only successful investigation of its psychic functions was also made by him, and his doctrines were for many years admired by the ablest scientists of Europe, but after his death fell into unmerited neglect, for three sufficient reasons: First, his method of investigation by studying comparative development was entirely neglected. Phrenology decayed when the fountain of the science was thus closed, as geology would have declined under similar treatment. But no student of comparative development has ever repudiated the discoveries of Gall. It was unfortunate that Gall and Spurzheim did not give lessons in cranioscopy. Secondly, the intense materialism of the scientific class has made them profoundly averse to all investigation of a psychic nature and to all profound philosophy. Thirdly, the inaccuracies of Gall's incomplete discoveries, especially in reference to the cerebellum, furnished some valid objections to his opponents, who paid no attention to his evidences, but condemned without investigation.

3. The cranial investigations of Dr. Buchanan, from 1835 to 1841, confirmed nearly all the discoveries of Gall, and corrected their inaccuracies as to anatomical location and psychic definition. He also discovered the locations of the external senses, and found the science thus corrected entirely reliable in the study of character. In these results he had the substantial concurrence of Dr. W. Byrd Powell, a gentleman of brilliant talents, the only efficient American cultivator of the science.

4. In 1841, Dr. Buchanan (having previously discovered the organ of sensibility) investigated the phenomena of sensitive constitutions, and found that they were easily affected by contact with any substance, and especially by contact with the human hand, so that the organic action of the brain was modified by the nervura from the fingers, and every convulsion could be made to manifest its functions, whether psychic or physiological, and whether intellectual, emotional, volitional, or passionial, so as to make the subject of experiment amiable, irritable, intellectual, stupid, drowsy, hungry, restless, entranced, timid, courageous, sensitive, hardy, morbid, insane, idiotic, or whatever might be elicited from any region of the brain, and also to control the physiological functions, modifying the strength, sensibility, temperature, circulation, and pulse.

5. These experiments have been continually repeated from 1841 to 1887, and have commanded unanimous assent to their truth from many committees of investigation, and have, during sixteen years, been regularly presented and accepted in medical colleges; hence it is not improper to treat this demonstrated science of the brain as an established science, since the establishment of science depends not upon the opinions of the ignorant, but upon the unanimous assent of its investigators or students.

6. As the brain contains all the elements of humanity, their revelation constitutes a complete ANTHROPOLOGY, the first that has ever been presented, and this science necessarily has its physiological, psychic or social, and supernal or spiritual departments. In its physiological department it constitutes a vast addition to the medical sciences, and essentially changes all the philosophy of medical science, while it initiates many fundamental changes in practice, which have been adopted by Dr. Buchanan's pupils. Hence it deserves the profound attention of *all medical schools*.

7. In its psychic or social relations, anthropology enables us to form correct estimates from development of all vertebrate animals, of persons and of nations, showing their merits and deficiencies, and consequently the *EDUCATION or legislation* that is needed. By showing the laws of correlation between persons, it establishes the scientific principles of *SOCIAL SCIENCE*, and the possibilities of human society. By explaining all the elements of character and their operation, it establishes the true *MORAL PHILOSOPHY*. By giving the laws of development it formulates the true *EDUCATION*; and by giving the laws of expression it establishes the science of *ORATORY* and the *PHILOSOPHY of ART*, making a more complete and scientific expression of what was empirically observed by Delacarte with remarkable success.

8. In its spiritual department, anthropology shows the relation of human life to the divine, of terrestrial to supernal existence, and the laws of their intercourse; hence establishing scientific religion and destroying superstition. It gives the scientific principles of animal magnetism, spiritualism, trance, dreaming, insanity, and all extraordinary conditions of human nature.

9. In the department of *SARCOGONOMY*, anthropology fully explains the trine constitution of man, the relations of soul, brain, and body, thus modifying medical and psychic philosophy, and establishing a new system of external therapeutics for electric and magnetic practice, which have been heretofore superficially empirical. It

also gives us new views of animal development and an entirely new conception of statueque communication and expression.

10. The magnitude and complexity of the new science thus introduced give an air of romance and incredibility to the whole subject, for *nothing so comprehensive has ever before been scientifically attempted*, and its magnitude is repulsive to conservative minds, to those who tolerate only slow advances; but the marvellous character of anthropology has not prevented its acceptance by all before whom it has been distinctly and fully presented, for the singular ease and facility of the demonstration is almost as marvellous as the all-embracing character of the science, and the revolutionary effects of its adoption upon every sphere of human life. This marvellous character is most extraordinary in its department of *PSYCHOMETRY*, which teaches the existence of divine elements in man, powers which may be developed in millions, by means of which mankind may hold the key to all knowledge, to the knowledge of the individual characters of persons in any locality or any age, of the history of nations and the geological history of the globe, the characters of all animals, the properties of all substances, the nature of all diseases and mental conditions, the mysteries of physiology, the hidden truths of astronomy, and the hidden truths of the spirit world. Marvellous as it is, psychometry is one of the most demonstrable of sciences, and the evidence of its truth is fully presented in the "*Manual of Psychometry*," while the statement and illustration of the doctrines of Anthropology were presented in the "*System of Anthropology*," published in 1834, and will be again presented in the forthcoming work, "*Cerebral Psychology*," which will show how the doctrines of anthropology are corroborated by the labors of a score of the most eminent physiologists and vivisection anatomists of the present time.

If but one tenth part of the foregoing cautious and exact statements were true in reference to anthropology, its claims upon the attention of all clear, honest thinkers, and all philanthropists, would be stronger than those of any doctrine, science, or philanthropy now under investigation; and as those claims are well-endorsed as I have ever challenged investigation, their consideration is an imperative duty for all who recognize moral and religious responsibility, and do not confess themselves helplessly enthralled by habit and prejudice. Collegiate faculties may do themselves honor by following the example of the Indiana State University in investigating and honoring this science before the public, and thoughtful scholars may do themselves honor by following the examples of Denton, Pierpont, Caldwell, Gatchell, Forry, and Robert Dale Owen.

The discoverer has ever been ready to co-operate with honorable inquirers, and has satisfied all who have met him as seekers of truth; a fact which justifies the tone of confidence with which he speaks. The only serious obstacles he has ever encountered have been the mental inertia which shuns investigation, the cunning cowardice which avoids new and not yet popular truths, and the moral torpor which is indifferent to the claims of truth and duty when not enforced by public opinion. When standing at the head of the leading medical college of Cincinnati, he taught, demonstrated, and proclaimed, during ten years, with collegiate sanction, for the medical profession, the doctrines which he now brings before the American people by scientific volumes (the "*Manual of Psychometry*," "*Therapeutic Sarcogonomy*," and the "*New Education*"), and by the *JOURNAL of MAN*, which, being devoted chiefly to the introduction of anthropology as the most effective form of philanthropy, may justly claim the active co-operation of the wise and good in promoting its circulation as the herald of the grandest reforms that have ever been proposed in the name and by the authority of positive science.

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The Terrible Power of Fanaticism.

HISTORY in all lands has been darkened by the gloomy terrors of fanaticism. The wild delusions bred in the heart of a corrupt and ignorant Church, which in the eleventh and twelfth centuries sent millions of deluded men, women, and children to perish in a senseless and disorderly raid against the Saracens, who were more civilized and enlightened than themselves, should be a permanent warning to all mankind against surrendering reason to the control of priestcraft, or yielding for one moment to any party which brings the ignorance of antiquity to control and resist modern progress.

Still more terrible and emphatic is the warning we receive from the history of witchcraft. A blind and ignorant devotion to the Old Testament, which is still the disgrace of modern Christianity, is responsible for *the greatest of all crimes* known in history — the slaughter of the innocent for the imaginary crime of witchcraft.

We are accustomed to dwell with horror upon the killing, scalping, and burning alive in war of a few prisoners by the wild Indians of America, but how utterly trivial and petty are these things prompted by angry passion, to the cold-blooded assassination and torture by fire of millions under the power of a *so-called* Christian Church, in which every principle of Jesus Christ was utterly reversed.

Accustomed as we are to a modern civilization, which has broken the power of superstition, it is very difficult for us to realize the horrible magnitude of these crimes against humanity which have so extensively realized the wildest imaginings of a "hell on earth."

According to Chambers's Cyclopædia, "Dr. Sprenger, in his life of Mohammed, computes the entire number of persons who have been burned alive at NINE MILLIONS"!!!

We find it difficult indeed either to believe or to imagine such a pandemonium as this! We turn aside from the horrid vision as if it were some unreal nightmare of a morbid fancy; but there it stands, the permanent record of a real Hell — *the only Hell that ever existed* or ever will exist — *nine millions dying by fire*, and perhaps a thousand millions looking on with demoniac satisfaction.

Let us hope that the historian has greatly exaggerated the number. Yet even if only one million of innocent human beings have borne the slow torture of a fiery death, how utterly impossible is it for human imagination to realize such a scene.

Let us imagine that the victims, their guards and executioners, the

priests and the thousands of spectators that must have attended each terrible spectacle, occupied only a space of four acres, and we have a territory of thirty-six millions of acres, or fifty-six thousand two hundred and fifty square miles, occupied by the infernal scene—burning alive the innocent victims of fanaticism.

We have ample details of these things in history—even among English-speaking people and followers of Protestant Christianity. Three thousand are said to have perished for this imaginary crime during the sittings of the Long Parliament in England. Four thousand altogether were thus murdered in Scotland—the last was in 1722, as the last in England was in 1716, and the last in Switzerland in 1782, so that we are little more than a century removed from these horrors—not even that, for “in 1863 a reputed wizard was drowned in a pond at the village of Hedingham in Essex,” England, by a mob; and even at the present time the belief in witchcraft exists in priest-ridden Mexico.

Nor has it entirely departed from the United States. When the writer was in Cincinnati, an old Presbyterian divine, who had charge of the leading Presbyterian Church in that city (Dr. Wilson), preached a sermon in which he inveighed against mesmerism with bitterness, and denounced it as a rebellion against divine law which ought to be punished. This was forty years ago. But even to-day in New England and in Boston, which the Rev. Dr. Lorimer says is the headquarters of the cranks; Mrs. Eddy is teaching the old doctrine of witchcraft, the power of injuring an enemy or victim at a distance, and some of her followers are said to believe in its practice. I have known also of a little conclave of pretenders to occult mystery, not bearing the label of *Christian Science*, assembling to try if they could not kill one whom they disliked in a distant city by their own spiritual energy!!

This subject was lately revived in my mind by reading a letter from Gen. Butler, the distinguished politician, to Capt. Black, of Chicago, in the course of which he alluded to New England Witchcraft as follows. “It is less than two centuries since seven men of highest standing, a majority of whom were reverend gentlemen, clergymen, as good and pious men as ever lived, as exemplary in every relation of life as it was possible for men to be, sat in a so-called court of justice, each morning session whereof was opened with prayer to the divine source of all knowledge, grace, and power, to direct the actions of his servants as the judges of that court; and in that court were arraigned day after day poor, miserable, broken-down, superstitious women and children, upon the accusation that they had commerce with the devil, and used his power as a means of spite upon their neighbors, and as one of the means of inflicting torture, because thereof the devil had empowered these poor creatures to shoot common house pins from a distance into their neighbors’ children, by which they were greatly afflicted. Being put to the bar to be tried, they were not allowed counsel, and, thank God, our profession was not disgraced, because the attorney-general was a merchant. The deluded creatures sometimes pleaded guilty, some-

times not guilty, but in either event they were found guilty, executed, and the pins, which were produced in evidence, can now be seen among the records of that court, in the court house of the county of Essex, Massachusetts!

"Beyond all this that court enforced, worse than the tortures of the inquisition, dreadful wrongs upon a prisoner in order to accomplish his conviction. Giles Corey was an old man, eighty years of age. He had a daughter some forty years of age, simple-minded, not able to earn her own living, and a small farm, a piece of land with a house thereon, which he hoped to leave to his daughter at his then impending death. Giles was accused of being a wizard. His life had been blameless in everything except his supposed commerce with the devil. Upon *ex parte* testimony he was indicted for his too great intimacy, and sent to the bar to be tried for his life. Giles knew that if he pleaded not guilty he was sure to be convicted, because that was the doom of the anarchists of that day; and if he pleaded guilty, he would be sentenced to death, and in either case the farm would be forfeited to the king. But if he did not plead at all—such was the law—then he could not be tried at all, and his property could not be forfeited to the king, and taken from his daughter. So Giles stood mute, and put the court at defiance. And then that court of pious clergymen resorted to a method to make him plead which had not been practised in England for two hundred years, and never here. Poor Giles was taken, laid on the ground by the side of the court house, on his back, with the flashing sun burning in his eyes, and a single cup of water from the ditch of the jail, with a crust of bread, was given him once in twenty-four hours, and weights were placed upon his body until the life was crushed out of him, but not the father's love for his child. He died, but not until his parched tongue protruded from the old man's fevered mouth. It was thrust back by the chief justice with his cane. The cherished daughter inherited. . . .

"Judge Sewell, a reverend clergyman, one of the judges of the witches, before he died, learned how greatly he had erred and sinned before God, and repented in sackcloth and ashes, literally coming out in the face of his congregation, and standing in the broad aisle of his church, exclaiming, while his written confession of his sins and folly in the witch cases was read: 'Alas! God have mercy on me for what I have done.'"

Have we profited by the awful lessons of the Crusades and the witch-burnings? Not unless we have adopted principles which will forever forbid the insanities and crimes of fanaticism. Not unless we have repudiated *in toto* the authority of the past, and determined to accept nothing which cannot be clearly proved. When we surrender reason to authority we are lost. When we surrender to the church, the college, or any other corporation, we are lost. When we leave the solid ground of reason to float in the bottomless realm of speculation, we are lost. When we accept blindly the intangible philosophies born of ignorance and dreary speculation, we are lost. And when our vanity leads us to suppose that we are nearer to God

than other men, that we know the divine will or law, and that it is our duty to *help the omnipotent God* to execute his purposes, and compel all men to obey *our conception* of God's will, we are not only lost, but we have become dangerous to society.

These errors are all in active operation to-day in *this country*. Millions are more or less enslaved in mind by the dicta of colleges and churches, so as to refuse to investigate anything beyond their present opinions, imbibed in education.

Many thousands, with but little scientific education and no scientific habits of thought, but with a large amount of speculative credulity, and generally with a respectable stock of vanity, which makes them unconscious of ignorance, are indulging in the dreamiest notions of the non-existence of matter, the omnipotence of spirit, the absolute divinity of their own puny souls, their grand careers in the cycles of past ages, when they dwelt among angels, or when they stooped to earth to appear as Julius Cæsar, or Solomon, orocrates, or some other distinguished person.

They revel in the mysteries of "Christian Science," reincarnation, or speculative and fantastic notions about the human soul and body contradictory to all science, the bogus miracles of pretended mediums, and the cranky theories of the healing art, by half-demented pretenders, one of whom informed me that he treated all parts of his own body *by means of his nose*. And yet this venerable ignoramus had his followers, one of whom on his decease stated in a newspaper that his discoveries were worthy to rank with those of Harvey!

The class of credulous dreamers are generally harmless, and sometimes amusing, but the fanatical class who feel themselves vicegerents of God are dangerous in a republic, for they are lineal descendants intellectually of those who burned the witches, and who invaded Palestine.

We have in this country a numerous and powerful body who believe that they have the right, through their master the Pope, to rule the earth, and who, wherever they have ruled it in former times, reddened it with the blood of the innocent, and in modern times have cursed it with ignorance, superstition, and demoralization.

The Roman Catholic Church and its central Jesuit conspiracy is dangerous to the welfare of any country that tolerates Jesuitism. It is determined to perpetuate mental slavery by taking charge of education everywhere. And yet it is destined certainly to fail, for in France, Italy, and Mexico, after being enthroned for centuries, the power of the church has been broken, and it must in time be broken even in Spain by modern enlightenment.

The struggle has commenced in the United States, and Boston is the present theatre of conflict. The Roman Catholic influence, which is all too powerful in all our large cities, has procured the removal of a text-book (by Swinton) which contained an unpalatable historic fact, and the substitution of another doctored to suit the Catholic party.

All denominations have reason to be ashamed of the past history of their churches, but Protestant denominations do not demand the

suppression of historic truth. Romanism cannot survive the diffusion of correct historic knowledge, but the people of this country are not willing that the light of history should be extinguished.

That religious liberty would be at an end if the Romish Church had supreme power has often been stated frankly by its leading representatives, and we cannot be too vigilant in resisting its war upon our common-school system.

But why is this ecclesiastic body so dangerous? Simply because it cultivates in its followers a blind faith in the absurd and impossible. Wherever such faith exists, there is no folly or crime which it may not introduce.

Protestantism, too, except in its most liberal denominations, cherishes the same *blind faith*, and has raised a band of fanatics who would gladly destroy the religious liberty of this country. They wish to change the United States constitution into a religious document or declaration of a creed; or, as they express it, to put God in the constitution, which will be but a preliminary step to disfranchising those who do not accept the creed, and governing the whole country as a church, in the fashion which prevailed in New England before the Revolution.

This movement has been looked upon heretofore as too insignificant to command much attention, but it has been steadily growing among the churches, and petitions with a vast array of signatures will be presented to Congress, gathered up by the zeal of a large number of the most bigoted of the clergy.

This movement has become more formidable of late by obtaining, through the influence of its president, Mrs. Frances E. Willard, the adhesion of the Women's Christian Temperance Union, said to have two hundred thousand members. These women are not yet voters, and it becomes a serious question whether woman suffrage would not be a misfortune, if, through the credulity and fanaticism of Catholic and Protestant women, religious liberty may be endangered. This is the strongest argument ever offered against woman suffrage.

Whenever bigotry makes its demands upon the republic, let us look to the dark and bloody past from which we have escaped, and resolve that we shall take no step backward, for the past is all darkness and tyranny, as the future is all light and freedom.

Ole Bull — the Inspired Musician.

THOSE who sneer at the idea that spirits can make their presence known to mortals through the simplest of methods — methods neither more complex nor yet more simple than the batteries and wires by which the messages of kings and kaisers are interchanged — are still ready enough to allow that spiritual inspiration is constantly manifested in the lives of great and exceptional persons, such as poets, artists, musicians, etc. Again and again the writer of this article has heard the claim made that OLE BULL, the king of all violin players, the very crown and apex of a great musician, was an inspired man; that he must be so, and that nothing less than the in-

flux of a higher and better world could breathe through the marvelous tones and glorious improvisations of this peerless performer. It was not until the present writer had met and conversed with this magician of sweet sounds, that the secret of his life and power was made clear to her. Ole Bull was not only an openly professed believer in spirit communion, but he declared, in a large company of Spiritualists, in New York, that from the time he could remember he had never been without *the voice* of an invisible being, who advised, instructed, and often rebuked him. When "hammering out" his musical ideas as best he could, as a boy, the voice would often praise, sometimes find fault with him, and tell him to try again, or practise in another way; or at times say, "Bravo," which was a sure sign he was going on well. Unlike the voice of Socrates's "*Demon*," which was always the same, the voices which Ole Bull declared "had accompanied him through life" were often changed, but to his mind ever seemed to bring such a strong idea of identity with them, that no mortal power could have convinced him it was not Tartini, Spohr, Guarnerino (the celebrated maker of violins), but above all Paganini or Joseph Haydn that spoke to him. After the decease of his friend Madame Malibran, he said it would have been impossible to persuade him that she was not *still alive* in some state that enabled her to speak to him as familiarly as in olden time; moreover, he said this beloved spirit friend, together with Pasta, would come and "sing on his violin bow," and when he used to hold it suspended over the instrument at the close of certain delicate passages without touching the strings, he could clearly hear the voices of his friends, *singing echoes*, and he felt obliged to pause and listen.

On one occasion, he said, he was so delighted at a very fine performance of the Handel and Haydn Society, as they sang "The Hallelujah Chorus," that he rose to his feet and fairly danced his applause by stamping. When the enthusiasm of the occasion ended, he distinctly heard a voice which he *knew* — though he could not explain *how he knew it* — to be that of Handel, murmuring in his ear, "Only shadow music, sung by shadows."

"My soul replied, and asked," he said, "'Where then is the substance, master?'"

"'In my world,' the voice replied, 'where alone all things are real, and music is the speech.'"

Such was the faith, the inner life and inspiration of Ole Bull; and having, we trust, so far interested our readers in one who shared their faith, and spoke in his delightful music so clearly of heaven and the speech of angels, as if an angel orally spoke, we shall give a few clippings from an American paper, in which a dear friend of the great musician has written a pleasant and graphic sketch of Ole Bull's life. This writer says:—

"The fond recollection in which the name of good Ole Bull is held is conclusive proof that 'a great man's memory may survive his life,' not 'half a year,' but while the soul responds with sublime desires to the enchantment of sweet sounds. It was long ago, February 5th, 1810, when the little Ole first opened his eyes to the light in the

Norwegian village of Bergen. Both Ole's parents were musical. 'Uncle Zeus' and grandmother Gedskén Edvardine Storm were specially fond and proud of him; saved him from much of the harsh discipline of his time, and indulged many of his fancies. He imbibed the rules of art unknowingly. He did not conceive the music as produced by players, but as proceeding from the instruments played, jubilating, triumphing, quarrelling, fighting, with a life of their own. Playing in the meadow, when he saw a delicate bluebell gently moving in the breeze, he fancied that he heard the bell ring, and the grass accompany it with the most enrapturing fine voices. Uncle Zeus played the violoncello, and had a collection of instruments. When only three years old the music was dancing all through Ole, and he must give it utterance. Running home he would seize the yardstick, and, with another small stick for a bow, endeavor to imitate what his uncle had played. He heard it, as he always affirmed, with his inward ear. When five years old his uncle bought him a violin 'as yellow as a lemon.' He played well on it from the first, though he had received no instruction. He would stand by his mother's knee while she turned the screws which would not yield to his little hand. The tuning was not easy, since his ear made him critical even at that age. His uncle taught him notes at the same time he was learning his primer. The imaginative turn of his mind gave him a profound sympathy with nature. Herr Paulsen, a Dane, was his first teacher. One evening he was in his cups, and could not play in Uncle Zeus's quartette, so the latter told Ole he might try. His memory served him well, and he played each note correctly. He gave the passages like an artist, and his uncle had him elected a member of the Tuesday Club. He was fond of composing original melodies, and in these he imitated the wind in the trees, the rustle of the leaves, the call of birds, the babble of brooks, the roar of waterfalls, and the weird sounds heard among his native mountains, and he used positively to declare he heard all the music he afterwards composed sounded out and arranged in the air before ever he played it.

"Ole and his six brothers used to select sea-shells of different tones to blow upon, and, under his direction, they practised until they produced some musical and pleasant effects. At other times the boys improvised songs with accompaniments. Ole would seek out the most solitary places, where he could sit and play undisturbed. If he could not make his instrument utter his thoughts, he would, after patient trial, fling it away, and not even look at it for many days. Then he would get up in the night, and play the strangest airs and melodies. At other times he would play almost incessantly for days together, hardly eating or sleeping in the meantime.

"Some one asked the grandmother how she could rest when the boys, so full of fun and mad frolic, were with her. 'Why, my dear,' she replied, 'if we sent nurses after each one, what would their guardian angels have to do?' The death of a baby sister made a great impression upon the sensitive Ole, especially as he had imbibed the idea that the little one hovered around him in visions, listened to his music, and was growing up to be a beautiful angel.

"At the age of nine Ole played the first violin in the orchestra when his father acted at the theatre. His father was one of the best amateur actors in Bergen. In 1822 a Swedish violinist, Lundholm by name, settled in Bergen. From him Ole received instruction. When fourteen years old, one evening his father brought home two Italians, and their talk was a revelation to him. They told him all they knew of Paganini. He appealed to grandmamma, and she procured him a bit of Paganini's music, which he played to his heart's content. In irony Lundholm told him to try this, which he had secretly mastered, and all were astonished.

"Ole's father wished him to become a clergyman. After three years' study, he was sent in 1828 to the University of Christiania. His fame preceded him. Restrained by his tutor from playing, he resorted to whistling and singing. Before long he could whistle, sing, and accompany himself on two strings, and later, in playing on all four strings at once. Occasionally he would combine six different themes at the same time. Accident made his examination a failure — though in reality a good thing. Old Thrase taken ill: he was appointed *ad interim* musical director of the Philharmonic and Dramatic Societies. A month later, on the death of Thrase, he was regularly installed in these offices, and at once attained independence.

"In 1814 began a new epoch in the liberty of the country. Later, Ole Bull convinced not only the outside world but the Norsemen that they could foster sons worthy their renown. The ambition of many a youth was kindled by him, who afterwards became widely known as musician, painter, sculptor, and poet. In 1831 the cholera raged fearfully. Ole had means to carry him through the winter, which he lost through the base treachery of a friend.

"Through a sign, 'Rooms to Let,' he gained admittance where his resemblance to a recently deceased son proved his salvation. The old lady's grand-daughter, the beautiful Alexandrine Felicie Villeminot, an orphan, afterwards became the wife of Ole Bull. Paganini came to Paris in 1831, and Ole heard him for the first time. Once, worn out and exhausted by the difficulties in a new composition, his father seemed as in a vision to stand before him as he was playing, and to speak with his eyes rather than lips this warning: 'The more you over-work, the more wretched you make yourself; and the more wretched you are, the harder you will have to struggle.' Ever after he avoided over-exertion or practice, as it deadened the finer sensibilities which must be relied on for inspiration. In the 'Polacca Guerriera,' the novelty and marvellous difficulty of the finale, in which the violin alone performs four distinct parts, and keeps up a continuous shake through fifteen bars, completely electrified the audience. There was a tempest of applause. In 1879 his E-string broke, and he substituted harmonics. He said: 'If you have the audience under your spell, never break it by a change of instruments, even for a broken string.' He married in 1836 the lady before mentioned.

"Late in June of 1880, Ole Bull sailed the last time for home, for Europe. He had not been well. The first days out revived him. Later, what seemed a violent attack of sea-sickness, the first he ever had, reduced his strength, but he reached home in Sweden, where he had a royal reception, and a few days later a royal funeral ending in a tribute from the peasants.

"After the coffin had been put in the ground and the relatives had gone away, there was paid a last tribute to Ole Bull — more touching and of more worth than the king's message, the gold crown, all the orders, and the flags of the world at half-mast, a tribute from poor peasants, who had come in from the country far and near, men who knew Ole Bull's music by heart — who, in their lonely, poverty-stricken huts had been proud of the man who had played their 'Gamle Norge' before the kings of the earth. These men were there by hundreds, each bringing a green bough, or a fern, or a flower; they waited humbly till all others had left the grave, then crowded up and threw in each man the only token he had been rich enough to bring. The grave was filled to the brim, and it is not irreverent to say that to Ole Bull in heaven there could come no gladder memory of earth than that the last honors paid him there were wild leaves and flowers of Norway laid on his body by the loving hands of Norwegian peasants.

"Ole Bull, though he had no dogmas to offer, fully accredited the being of God, the immortality of the soul, and the immense superiority of unseen supernal forces to the seen. He lived an ideal life, free from mercenary aims, so charming and enchanting men that his name has now become a household word through all Norway."—*The Two Worlds.*

The Sceptic's Difficulty.

THE following concise statement of the case was sent to the *Free-thinker's Magazine*, in which it was published. Those who are interested in new sciences should always uphold this short and decisive method of meeting objections. All sciences consist of facts, the validity of which rests upon competent testimony. The testimony as to psychic and anthropological sciences is abundant and satisfactory to all who recognize the value of scientific evidence.

Anyone who, from opinionated egotism or sceptical dogmatism, rejects the valid testimony on which all scientific knowledge rests in the public mind, makes himself an intellectual outlaw, and it is a waste of time to discuss such questions with him.

"Mr. Wettstein's difficulty, like that of many other very intelligent persons, appears to be that he assumes as an unquestionable postulate that nothing exists but ponderable material forms and their properties. This is begging the question, for this is the very proposition under discussion — whether there can be real existences that have not the properties of the matter. Let Mr. W. give up his positive *assumption*, and enter the discussion fairly, for he must not assume what is not conceded. In this impartial state of mind let him

reflect how many potent realities there are which are not material. For example, when one ball strikes another with force and is suddenly arrested, while the second ball proceeds with a similar momentum, a certain amount of force has been imparted from the first to the second, giving it power to produce material effects. This force is not matter, but it is just as real as matter, and just as indestructible, according to the opinions of scientists generally. In fact, all we can discover of matter is its definitely localized force, by which it resists our touch; take that away and nothing is left.

"Force, then, the basis of the universe, is not matter, but generally accompanies and resides in matter, though it also passes from one material substance to another. It also passes from the sun to the earth, through many million miles of vacuum, and is a tremendous reality when it reaches the earth, capable of producing a vast variety of phenomena. This basis of all nature is something that we cannot find in a definite form or with any weight, and must be *nothing* to the ultra-materialist. There are many other things that are real and powerful which have not the properties of matter. When steam parts with its caloric and becomes water, every atom of its substance remains, no weight is lost. That which has departed, caloric, is just as void of tangible form as a human soul. We acknowledge its existence because it produces effects, and because we can feel it. Just so in reference to the human soul.

"When the caloric, which gave steam its power, is gone, only a savage would deny its existence, because he cannot see it, handle it, or weigh it. Science follows the caloric and studies its properties. So when the soul, which gave to the human form its vital properties (the *life* which even Mr. W. recognizes) has left the body powerless, an honest enquirer should be as ready to follow and discover it as to follow and discover caloric. The caloric, when sufficient in amount, can be recognized by the senses, but when of a small amount it is imperceptible. The soul element in a man, or biogen (as Prof. Coues calls it), is much more subtle and difficult of perception than caloric — more subtle even than the actinism of the solar ray, which we know only by its effects. But it is not imperceptible; if it were it would never have been perceived, and only superstitious fools would have believed in it. We can all perceive the force of mind in the living body — its courage, intelligence, and love; but when out of the body its perception requires subtler faculties in the observer. But it can be positively perceived, and from my investigations I think it safe to say that there are more than a million of individuals to-day in the United States who can perceive the existence and qualities of the disembodied spirit. I can find them abundantly anywhere, and have found them even among those who were as positive as Mr. Wettstein that no such things existed or could possibly exist. My own knowledge upon this subject is entirely the fruit of investigations, conducted as carefully as any other proceedings in science.

"I do not know whether this argument can be appreciated by Mr. W., for, as he intimates that the imponderable forces are merely fine particles of matter (which no well-educated scientist believes), I fear

that he prefers dogmatic opinions to science. It is a pleasure to argue with rational materialists—men who have followed the path of science honestly and fearlessly, and rejected spiritual existences because they find no evidence of them in material science, and they have not looked at psychic science at all—they know nothing of its facts. Give them the psychic facts and they are ready to reason upon them. But my criticism upon the majority of *dogmatic* materialists is, that they think their own *opinions* worth a great deal more than *facts*, and will not seek to know the very positive facts which are well known and testified to by millions who are at least as intelligent as themselves, many of whom have investigated the question from the standpoint of sceptical materialism, and been convinced by irresistible facts. It is a very undesirable and pessimistic state of mind which leads any one to lay down dogmas upon a subject he has not really investigated, and then, still neglecting to investigate, to treat with insolent contempt the facts familiar to his fellow-citizens, which are as well established by innumerable cautious and sceptical investigators as anything in chemistry, geology, or geography.

“The dogmatism of the Calvinist is not more unreasonable than the dogmatism of a materialist who imitates the Calvinist in refusing to investigate the facts. The characteristic test of science is that all who carefully investigate it agree. All investigators of psychic science are substantially agreed; the discussion is among those who really know very little about the matter.”

The Ignoramus

Is a very numerous and very important individual in society to-day, as he always has been. He is a noun of multitude, and is the sun and substance of all multitudinous movements.

As a general rule, in science and literature, he is fascinated with famous names, and cares for nothing which has not a multitudinous endorsement. He likes to speak of Plato and Aristotle, without knowing a page of either, and thinks the names of Emerson, Tennyson, and Browning adorn his conversation. In science he is very sure to refer to Huxley and Tyndall, but what they have written he could not tell if questioned. Yet he is easily caught by pretenders. If Mrs. Eddy assures him there is nothing in the universe but God, and consequently that he is a large part of God and capable of doing miraculous things, the doctrine delights him. But as to Spiritualism—he is very suspicious; he thinks it must be a very dangerous and demoralizing system, because Talmage or some one of his kind has said so. If he wishes to investigate its truth because somebody has told him a wonderful story, he goes to the most notorious impostor who has the largest handbills. He knows nothing of the able works on this subject, and reads nothing but the buffoonery of some newspaper reporter as ignorant as himself. He fills the halls and the pockets of Ann Eva Fay, Bridge, Starr, Lincoln, and other impostors of that class. When it is advertised that a piano will float in the air, and ghosts appear numerously in the theatre, he is sure to be there, and thus he discovers that there is nothing in Spiritualism.

He visits Mrs. Elsie Crindle Reynolds, on the assurances of gullible Spiritualists, and there confirms himself in knowing that Spiritualism is all fraud. He runs to hear Mag. Fox tell her idiotic falsehoods, and there attains the most positive knowledge, and fills the entire measure of his intellectual capacity, which is fortified against enlightenment by the assurances of Bishop that clairvoyance is only muscle reading.

Of animal magnetism he had a very contemptuous opinion, until some one assured him that every man was a natural magnet, and if suspended from his centre of gravity by a wire with an exact equipoise, his head will point exactly to the North Pole! This, together with the assurance that the faculty in Paris were investigating animal magnetism, under the name of Hypnotism, gave him great hopes that there might be something in it.

In politics he is especially multitudinous. He makes processions several miles long to prove that some candidate ought to be elected, and demonstrates his political philosophy by carrying a thousand blazing torches at night, on which occasion his eloquence is irresistible, for he yells by the half hour. Whether he maintains that Cleveland will ruin the country by free trade, or that Harrison will ruin it by Chinese immigration—he proves it by a prolonged yell. He yells to prove that Cleveland has sold himself to the British, or that Cleveland is vigorously twisting the British lion's tail.

He swells to a hundred thousand at New York just before the election, and at the head of the procession of howlers, the leaders, as described by a reporter, in the most whole-souled manner “flung both hands in the air, hat in one hand and flag in the other, bent themselves nearly double, stamped on the ground, and yelled with all their might, so that, if any one should show these men instantaneous photographs of themselves, they would emigrate forthwith to some vast wilderness, and meditate upon the utter craziness of men with politics on the brain.” But Ignoramus has been quite harmless of late—he only wishes to demonstrate that Mr. Blaine is the greatest statesman in the world, or that Mrs. Cleveland is a queen, or a goddess, of ravishing beauty.

Ignoramus is sometimes disturbed with serious thoughts of the future. He is very much afraid that women will lose all their charms, forget their duties, and neglect their duties if they are allowed to vote; and he is afraid that everything will go to ruin by *inflation* of our money system. He fears that if our energetic people have as much money *per capita* as they have at present in France, they will fall into ruin financially, for somebody has told him that *inflation* is dangerous; too much money and too much liberty are his scarecrows. He thinks that doctors who cure people without having college diplomas are very dangerous to society—but at the same time he is quite sure to run after the doctor who has the most ostentatious advertisement. In all things he is a *quid nunc*, looking for something sensational, and Talmage is his *beau ideal* of a clergyman. He admires, too, the Rev. Dr. S., who after his manuscript written in Sanscrit was interpreted by a psychometric medium, hurried away to escape from the works of the devil.

The Argument for Temperance.

AT a meeting in Tremont Temple, in behalf of no-licence, December 3, a letter from Gov. Ames was read, in which he said, "The saloon is a most dangerous factor in our social and political life, and it must be restrained and finally suppressed." The Rev. Hugh Montgomery made an able argument, from which the following quotations are presented as very instructive:—

"Liquor sellers, liquor drinkers, advocates of license and of prohibition all agree that alcohol as a beverage is a curse to the human race. Now the simple question is, how can this universal plague be removed in our large cities,—by a high license or by prohibition? Those who advocate a high license refer to only two of the features, viz., that there are fewer saloons and a larger revenue. They never refer to the amount of liquor drank and the crime committed through their pet scheme. Now, we ask all candid men to weigh the facts and decide according to the evidence. Statistics from Europe and America, from reliable sources, show that ninety per cent. of the crime, suffering, and pauperism in these great nations is due to intemperance. Then why license it? In 1743 Lord Chesterfield said that 'luxuries may be taxed, but vice ought to be prohibited.' Again he said, 'Would you lay a tax on the Ten Commandments?' History, from that time to this, with our own personal experience, prove that vice ought never to be licensed. The London Telegraph, twenty-six years ago, said: 'Our revenue may derive some unholy profits from the sale of alcohol,' and that 'the entire traffic is nevertheless a covenant with death,' and it might have been said, 'a league with hell.' An itemized report from Great Britain shows that for every \$5 received from revenue of the liquor traffic by the government it has cost the people \$50.

"Secondly, it is astonishing to hear sensible men, in public and private, talk of high license as a new plan which ought to be given a fair trial. High license has been tried in many States, towns, and cities, and found wanting. The famous Harper high license law in Illinois proved to be a dead failure. In Chicago it has been tried for the last five years: in 1882, under low license, the arrests for crime were 18,045; in 1887, under high license, 27,632, an increase of 9,587. A \$1000 license was tried in Nebraska, known as the Slocum law. The records of the courts show that drunkenness increased, gambling increased, and all kinds of vice increased. Iowa tried it for years, and facts show that crime doubled, and after a fair trial she abolished it, and has to-day prohibition. St. Louis had a \$75 license in 1883, and arrests were 7,836. In 1887, under high license, crime increased 20 per cent. Atlanta, in 1887, had high license, \$1500. The first six months crime doubled as compared with no-license. What is true of the above place is true of every place we have known, except Philadelphia.

"The New York Tribune about two years ago sent out to its readers asking whether they believed in high license or in prohibition. Answers were received from 18,000 voters, and they showed that about 4000 of the number believed in high license, and the balance,

about 14,000, in prohibition. Let us now call your attention to facts in our own State. High license has been tried in Worcester for the last two years. We have had the same mayor and city marshal for the last three years in that city, who have rigidly enforced the existing laws. In 1886 we had no-license, and the total arrests for crime were 2917. Seven months of this year were under no-license. In 1887 we had a license and about two-thirds of the number of saloons were licensed. There were 4236 arrests, an increase of crime of 1319. In 1888 we have still fewer saloons and a still higher license; but for the last six months we have committed to our jails 1390 for drunkenness alone, while during the same time under no-license only 872 were committed. They pardoned out of jail under no-license during six months, for good behavior, 56, and this year under high license, during the same time, they have been compelled to pardon out over 300 to make room for bigger criminals. We have the testimony in that city of the mayor, city marshal, and 52 manufacturers, whom I personally visited, who emphatically say that high license is a failure, and believe the time has come when the liquor traffic should be prohibited by law. The speaker here referred to a number of other cities and towns, and gave the facts to prove that "high license has been weighed in the balances and found wanting." He then contrasted the license system with the prohibition system, and claimed that prohibition does prohibit wherever it is allowed to remain on the statute books long enough to give it a fair trial. This was shown by the statement of Gov. Martin of Kansas and Gov. Larrabee of Iowa."

Undoubtedly the suppression of saloons diminishes drunkenness and crime. But wherever it is done there is a strong undercurrent of resistance which breaks out openly in cities.

It does not as yet appear practicable to suppress the saloon entirely in large cities. It is not done in Maine. Boston, under the present laws, will have the saloons reduced after the first of May from their former number of 3000 to less than 800.

We need something still more thorough and effective. What we need and what we can do for the eradication of intemperance will be considered in the next volume of the JOURNAL OF MAN, to which I would invite the attention of all sincere reformers.

Industrial Education.

At a meeting of the Boston Boot and Shoe Club Dec. 5, the subject of Industrial Education was discussed by some of its personal friends.

Dr. Samuel Eliot referred to the general interest in all industrial education, remarking, however, that the idea is not a new one. The great Englishman Locke, in the 17th century, urged that every boy should be taught a trade, and in the next century Rousseau advocated manual training, and the use of tools by young people. In the schools of Boston the idea is not new, and for many years carpentry, drawing, modelling, printing, cooking, dressmaking, and a great variety of useful occupations have been thoroughly and conscientiously

tiously taught, as any one can learn by a visit to the school on North Bennett street, which stands a monument to Boston's intelligence and charity. Dr. Eliot was not prepared to say that the overcrowding and confusion of mind of the past should not be a warning and should not impel us to relieve the public of the burden of carrying on the work of industrial education.

The speaker quoted several instances in which remarkable confusion of ideas have resulted in some schools which had come under his notice. Let the public schools give manual training, drawing, sewing, and like departments, which shall not interfere with the regular curriculum of instruction. Dr. Eliot spoke in high terms of Mr. Williamson's idea of free schools of industrial training, but regretted that girls and colored boys are not to be included in its privileges. He appealed to the club to establish a boot and shoe training school for boys and girls, irrespective of color, and predicted great results, even though the beginning might be small. Dr. Eliot was heartily applauded as he resumed his seat.

Dr. John G. Blake, of the Boston school committee, was the next speaker. He referred to the fact that but few boys are able to carry their education further than the graduating class of the grammar school. It took about 10 years to induce the Boston school board to take the first step, and because the apprenticeship system is practically destroyed it is difficult to surround many of these boys with proper influences. Dr. Blake regretted that in the United States less has been done in the matter of industrial education than in Russia, Germany, France, England, and other countries. In the interests of morality and American labor educate your boys! That is the true solution of the problem of Protection. [Applause.] In Chicago a club of business men has organized a school for the recruiting of skilled labor, and in St. Louis a somewhat similar idea has been put in practical operation. Dr. Blake believed that boys and girls, after graduation, should be placed in technical training schools and instructed in the leading industries. Dr. Blake regretted that the \$250,000 once offered to the city of Boston by Mr. Ruggles, the inventor of the Ruggles printing presses, for the establishment of a large industrial school, was declined by the city government and the money went to Mr. Ruggles' distant relatives. Dr. Blake urged the club to make some effort to place Boston right on this question of industrial education.

Prof. John D. Runkle, who in 1876 introduced the system of industrial education into the Institute of Technology, was next introduced. He referred to the operations of the strictly typical trade schools in European countries, as, for instance, the institutions for teaching watchmaking, by which the great watch factories are recruited, and expressed the opinion that the idea as thus developed is a wrong one. There should be no class education; but such training should be offered as shall enable boys and girls of every bent of mind to think, solve mechanical problems, and thus develop their ability and aptitude, as has been done in Brookline. After six years of experience, the result in the "vacation" school has been so satisfactory that the committee has decided to establish a permanent

industrial school. Boys are given two lessons in carpentry a week; mechanical and freehand drawing is an integral part of the school work. The question is: Do arithmetic, geography, and history develop all there is in a child that is worth developing?

Mr. James A. Page, for very many years master of the Dwight school, and the teacher of not a few present, was the next speaker. He was satisfied from experience that the place for industrial education is the public school. Facts, not theories, are what must be considered. Stanley Hall, Dr. Harris, Felix Adler, said that drawing a thing and making a thing is very much easier than describing that thing in abstract language. Manual training is mental training, *per se*. Manual training is such a relief to the regular school course as to be a positive benefit, and not a detriment to the pupils. Sir Charles Bell uttered the conviction that there can be no perfectly developed and cultivated brain without the accompaniment of an educated hand, and the experience of observant instructors bears out this assumption. Mr. Page's address was listened to with rapt attention and liberally applauded.

Prof. Edwin P. Seaver, superintendent of the Boston public schools, regarded the term manual training as misleading. It is not the training of the hand so much as the training of the mind. There is no complete and thorough training of the mind without a skilful hand. But the speaker's main point was that the public school principle is capable of a very great extension in order to meet the educational requirements of the time, viz., free schools of mechanic arts. When it is urged that the city of Boston must not go so far as to spend the public money for the training of any boy for any special trade, it should be remembered that for the past 250 years the Boston Latin school has been going a long way in fitting men for the bar, the pulpit, and the learned professions generally. Apprenticeship is a thing of the past. There are hundreds of boys in our city who need industrial education, and are they not entitled to it? Mr. Seaver mentioned as very significant the fact that the locomotive works in Philadelphia, after three years' trial of graduates from the Girard College industrial school, made a standing offer to the effect that any graduates from this college class in the future would be allowed a remission of two years of the five years which ordinary apprentices are required to serve in the establishment. Boys in Girard College who gave but ten hours a week to technical study were thus declared by hard-headed, practical men as being as proficient as boys who gave fifty hours a week to acquiring knowledge in their own establishment.

Reclaiming the Desert.

THOUGH it has long been known that the tribes of aborigines who once existed in the States and Territories of the Southwest had a system of agriculture which permitted them to subsist in towns of considerable size, we have not realized until recently the extent of their resources and the ability they displayed as engineers. The Hemenway expedition has examined ancient lines of canal in Southwestern Arizona in the valley of the Gila and its chief tributary the

Salado, rivers which pour their waters finally into the Gulf of California, like their northerly neighbor, the Colorado. Between the Salado and the Gila, where there is now only a growth of such plants as endure a torrid climate, without rain for the greater part of the year, the ancient people had their towns and cities. Some of the communal houses were several hundred feet square and three or four stories high. One city was traced for three or four miles, and contained between forty and fifty of these large structures, which were irregularly placed, after the fashion of Indian towns. Each large house is supposed by Mr. Cushing, the ethnologist of the party, who has made the Pueblo Indians a lifelong study, to have held the members of one clan. The walls were sometimes of adobe bricks, and sometimes they were strengthened with posts and wattles. Each town has a separate larger ruin, surrounded by a strong wall so as to form a yard. Here Mr. Cushing locates the abode of the chief ruler or priest, the stores of the town, and the citadel in case of an attack. It is estimated that the two valleys of the Gila and Salado supported at one period no less than 200,000 souls.

This could only have been accomplished by irrigation. It appears that the water from the Salado was run across the flat land between it and the Gila for a distance of from fifteen to twenty miles. The new settlers have already begun to use the ditches contrived by the extinct population. The canals were dug in terrace outline, filled with brush, and then burned out in order to solidify the bottom and sides. "Mr. Cushing," says the *American Naturalist*, "is of the opinion that they used rafts made of reeds for navigating these canals, and this seems more probable from the heavy materials that have been brought from a distance. It seems certain that they floated the pine timber used in their building operations down the Salt and Gila rivers from the distant mountains." These people burned their dead as a general rule, collecting the ashes into an urn, which was commonly broken, in sign of death; but the expedition found so many skeletons buried within the larger buildings mentioned, just beneath the floor, that it appears to have been the custom to bury chiefs and priests. A food vessel and highly-decorated water jar were buried with the corpse, and sometimes arrow and spear heads. In one grave a large stone knife and turquoise ornaments were found. Tools and weapons are generally of stone, and there are a few copper ornaments, shell carvings, inlaid with turquoise, and other decorations common to semi-savage tribes. The pottery is of many colors and carries a fine glaze. They had smelting furnaces in the mountains, and appear to have stood on much the same plane of cultivation as those Zunis to whom Mr. Cushing is guide, philosopher, and friend.

The opening up of these old canals is the first step to cause the deserts now covered by mesquite to support a fair population. With modern appliances it is not impossible that the Colorado, rushing along the bottom of an enormous cleft in the earth, down which Major Powell made his venturesome trip years ago, should spread its fertilizing waters over portions of the Yuma and Mohave deserts instead of losing them in the salt waves of the Gulf.

Chap. XVII. — The Intellectual Region of the Brain.

ILLUSTRATED BY PATHOLOGY AND ANATOMY.

Intellectual discoveries of Gall and Spurzheim — Lallemand's case of injury of the forehead and loss of intelligence — Connection of paralysis and loss of language — Solly's case of disease of front lobe and loss of intellect — Lallemand's case of strictly limited disease of front lobe and loss of intellect — Iron bar shot through the head — French case, wound in frontal sinus, amaurosis and loss of memory — Dr. Crawford's case of blow on the forehead and loss of memory of language — Case of tumor on the forehead and disorganization of both front lobes, with great loss of intellect and good temper — Ducrot's report of fracture of the frontal bone with depression, followed by loss of speech, sense, memory, and judgment, with idiotic countenance — Dunn's report of attacks of hemiplegia with partial destruction of the corpora striata and left front lobe, and inability to say anything but *dat!* Testimony of Hitzig and Meynert as to the front lobe — Influence of the occiput on the intellect — Influence of the base of the brain and the pelvic region — Vindication of Gall's discovery of the Language organ by pathological researches — Conduct of the faculty — Connection of the intellectual organs and the corpora striata — Their motor and sensitive nuclei — Distribution of motor and sensitive fibres in the brain — The intellectual, emotional, and executive regions of the brain as the foundation of the New Education — Connection of the executive with both intellectual and emotional regions — Illustrations by pathology and vivisection — The brain a psycho-physiological organ, requiring profound study.

Notwithstanding the fashion of ignoring the discoveries of Gall and Spurzheim, the force of common sense in the medical profession is too great to permit them to be unconscious of the intellectual functions of the front lobe, in which every one who uses his intellect vigorously is conscious of some local feeling.

Injuries and diseases of the front lobe, though imperfectly reported, have necessarily illustrated the science of the brain by showing that the front lobe (or rather the brain of the forehead, for anatomists of late have extended the name of the front lobe beyond the forehead) is of all portions of the brain the least necessary or important to life, and that its loss or injury, though interfering with intellect, never involves the physiological faculties or passions, and never interferes with the vital force.

This effect of injuries of the front lobe in impairing the intellect without in the least impairing the health, was well illustrated in the case of Marie Lucas, aged forty years, who after an injury of the forehead had undergone trepanning, after which she became subject to epileptic attacks. This is one of the cases reported by the celebrated physician Lallemand.

In the autopsy, the cicatrice, an inch and a half long, was observed on the left side of the forehead. The bone at the spot was entirely sound, but the dura mater within was thickened and adherent through the arachnoid to the gray substance, which at this spot was very soft, pulpy, and of a yellowish color. A great part of the left front lobe was thus softened, but the remainder of the left hemisphere was perfectly sound, contrasting in appearance with the morbid part, and the right hemisphere was perfectly sound, and nothing wrong in the chest and abdomen.

This was a clear case to illustrate the functions of the front lobe,

to show a loss of intellect but not of the physiological vigor. In the year following her injury it was observed that her mind was enfeebled, and she was frequently absent minded. As these symptoms suddenly became more prominent in January, she was carried the 1st of February to the Hotel Dieu, and it was observed that *her constitution was not at all affected*, but that she appeared to be in flourishing health, though *in a state of stupor*, with face somewhat injected and agitated by convulsive movements, which appeared also in the right eye and arm, and were aggravated by touching the epigastrium. The convulsive movements increased, respiration was laborious and noisy, and during three days these symptoms continued with *stupor*, and a paralytic condition began to appear, when death arrived after three days' confinement.

The suppression of intelligence was rather greater than usually occurs when only one hemisphere is affected, but it is very probable that the adjacent surface of the right lobe, which is the seat of consciousness, was affected by the sympathy of contiguity and the influence of the inflammation in the dura mater, which is not said to be limited by the median line. The convulsive movements of face and arms on the right side must have been produced by the extension of the inflammation back from the front lobe into the corpora striata. This indicates plainly that the control of the facial movements and upper limbs belongs to the anterior portion of the striata adjoining the front lobe, and there are other cases reported which sustain this view.

It is also well known that impairment or destruction of the faculty of language, which lies at the posterior margin of the front lobe, where it is in contact with the middle (or sphenotemporal) lobe, is very commonly accompanied by sufficient disease of the striata to produce more or less complete paralysis — the corpora striata being immediately adjacent, behind the organ of language.

Sir Samuel Solly, the able anatomist, reported the case of a woman of thirty-eight years, whose attack began with vomiting and "partial loss of consciousness." When first seen she was weak, and was slow in replying to questions. For two days she manifested increasing dulness, until, at the close of the second, her mind was gone, for, though capable of speaking, she was drowsy and did not know her medical attendant. She died next morning. In this case Mr. Solly found the under part of the right anterior lobe "so soft that it gave way to the finger, and when the brain was removed we found the anterior portion of the corpus callosum also torn and evidently softened." This is the portion of the corpus callosum which connects the intellectual organs. There was also a layer of effused blood between the hemispheres, and upon the front lobe, and a small clot at the fissure of Sylvius about the size of a hazel nut. This is at the posterior boundary of the intellectual region.

Another case was reported by Lallemand of injury of the left front lobe and impairment of the intellect, which makes a very good illustration. The patient, Bariat, a tailor of fifty-five years, subject for many years to hæmaturia, with a diseased bladder, had a hemorrhage Jan. 6, 1818, which was quickly suppressed, and two days after

experienced a notable diminution of his memory, and a fixed pain in the front of his head. February 6th, he entered the Hotel Dieu, with the left angle of his mouth a little retracted, his *speech embarrassed, and his memory confused*. He forgot what he had to say, and his answers to questions were slow. Yet he had a good appetite, tranquil sleep, and no paralysis. During eleven days there appeared to be some improvement developed, but on the 12th he died in his bed without any premonition.

In the autopsy the dura mater adhered to the subjacent membranes, and the cortical substance of the brain also adhered to them, for a space as large as a thirty-sous piece, on the left front lobe, and had a hardened cartilaginous appearance, but the subjacent white substance of the front lobe was considerably softened. All the rest of the brain in both hemispheres was in its natural condition, except that it was strongly injected.

This is as good as an experiment in vivisection, showing the partial destruction of one of the front lobes, and corresponding impairment of intellect. The slight defect in the facial muscles of the right side, illustrates, like the case of Marie Lucas, that the portion of the striata which is so anterior as to be affected by the intellectual organs is the portion which governs the muscles of the face. When the injury of the front lobe is nearer its base, it affects the muscles of speech, which are also governed at the anterior part of the striata.

The report, though far from being as complete and accurate as it should be, shows, like the previous case, that great injury of the intellectual organs is compatible with undisturbed health. The disease of the bladder in this case was the cause of injury to the brain, but the report shows no apparent cause of death unless it be the *exhaustive* tendency of frontal irritation of the brain.

That extreme anterior injuries of the brain are comparatively harmless, because the anterior organs are destitute of physiological power, was never better illustrated than in the case of Phineas Gage, Sept., 1848, which I published in full at the time. In this case a tamping iron an inch and a quarter in diameter and *forty-three inches long* was driven by a gunpowder blast through the man's head, from below upwards, passing inside of the cheek-bone, and at the back of the eye-socket, coming out at the median line above, a little behind the forehead, and yet the man survived, with but very little disturbance of the brain, and little suffering. This is the most marvellous injury of the brain ever recorded. Brain substance was lost and some of the eye muscles disturbed; but his easy recovery is unexampled in the history of surgery! Why? The brain substance destroyed by the passage of the iron bar was chiefly in the region of disease (morbific sensibility), the loss of which is even less injurious than the loss of the intellectual organs, and the effect of this injury must have been to increase his hardihood and resistance to disease, by diminishing his sensibility. Such resistance is never seen when the injury is behind the ears, or in the posterior half of the brain. This case is so important that I shall give it a special exposition hereafter.

In the *Lancette Francaise* of 1833 there is a report of an officer who was wounded by a ball in the right frontal sinus, which produced amaurosis and a total loss of memory of events and objects. The frontal sinus covers the perceptive organs, and sometimes extends over the region of Memory.

Dr. Crawford has reported a case in the "Cyclopædia of Practical Medicine," in which a blow on the forehead, just above the nose, produced disease, making it necessary to remove a portion of the bone with the trephine. In this case a loss of the memory of language was reported to have occurred.

The *Edinburgh Journal*, in its thirty-eighth volume, contained a report which, like most of reports concerning the brain, is far from being as complete as it should be. It was the case of a woman, who, in consequence of a tumor on the forehead as large as an egg, producing headache and epileptic fits, changed in her deportment from kindness to being very irascible. She lost the faculties of adding numbers, of distinguishing colors, and of recollecting persons, and forgot the looks of her most intimate friends, whom she recognized by their voices. In this case both frontal lobes were disorganized, there being an abscess in the right, and an osseous tumor in the left.

In a case reported by Dr. Ducrot ("Essai sur la Cephalite," 1812), and quoted by Lallemand and by Solly, "Mr. A., about sixty years of age, had a fracture with depression into the left frontal region, by a stone thrown with violence; he lost much blood, but was able to return home;" from which he died on the eleventh day. In the autopsy, the effects of the inflammation and compression were observed, the inflammation having extended in the membranes of the brain sufficiently to account for the paralysis, and through the front lobe sufficiently to account for the paralysis of the intellect, which was the first and most prominent symptom.

On the second day he had "confusion of memory and inability to give proper answers to questions; on the fourth day there was *drowsiness*; on the fifth day *drowsiness* increased, with *loss of speech*; and the same symptoms increased on the sixth. On the eighth day "delirium, loss of sense, convulsive motions of trunk and limbs, respiration difficult, snoring, eyes fixed, gaping mouth." On the ninth "the convulsions cease, the drowsiness diminishes, his senses return, but the *alteration of memory and judgment* continues," with "slight delirium, the left limbs begin to be paralyzed." On the tenth "complete paralysis of these limbs, with rigidity and slight pain when they were raised from the trunk, the *countenance idiotic, answers not correct, optical illusions*." Eleventh day, "loss of sense, aphonia, immobility and general insensibility, coma," and death.

The autopsy, though not as well described as desirable, corresponded to the phenomena. "Depression two lines in depth, for about two inches on the frontal region," was reported; and an inflammation is mentioned on the median line, extending on one side to the corpus callosum, on the other to the base of the brain. Although the statement is very inexact, it is clear that a severe injury was in-

flicted on the forehead, from which an inflammation extended in the centre of the intellectual region.

The injury to the intellectual organs may come from behind as well as before, and this we see in cases of paralysis, in which the corpora striata are affected, which lie immediately behind the intellectual organs. When they are injured, the most posterior intellectual organs suffer, and consequently language is affected.

A case was reported by Surgeon Robert Dunn to the Royal Medico-Chirurgical Society in 1850, in which the patient, an aged female, after an apoplectic attack, became hemiplegic, but soon recovered entirely, appearing to be restored in all respects to general health except "the habit of *using one word for another*, and of not applying the proper and appropriate names to the things signified." Over two years afterward she had another attack, resulting in hemiplegia of the right side. General health was again restored, but the paralysis continued, with a *loss of language*. The movements of the tongue were free, as well as the movements of deglutition. Her mind also appeared to be active; but she could not utter a word except the monosyllable *dat*, *dāt*! When she attempted to speak, she sometimes shed tears for her incapacity. It is evident, therefore, that the paralytic affection of the striata had invaded the organ of language, and in this condition it would be difficult to judge how much her intellect was impaired.

In the autopsy, it was found that the upper two thirds of the front lobe of the left side were completely disorganized and pulpy, and the upper half of the left corpus striatum was destroyed, the injury extending to the thalamus, which was reduced to less than half its natural size, its upper surface being greatly wasted. This corresponded to the right paralysis of the body.

On the right side were indications of disease, which caused the first attack on the left side. There was an apoplectic clot in the striatum and a state of softening extending to the margin of the thalamus. In addition to this the corpus callosum was nearly destroyed.

There must have been great intellectual impairment in this case, which would have been displayed but for the total loss of language, as the front lobe was as much injured as in the case of Marie Lucas.

The physiologist Hitzig, who has done so much in vivisection, has recognized this effect of frontal injuries. He says: "Mention must be made of the view contended for by Meynert that the peculiar weakness of memory noted even in the initial stage of general paralysis is referable to an early invasion of the front lobe. This view is supported by Meynert's anatomical investigations, as well as by the fact that in the gradual succession from the Primates up to Man the frontal lobe continually increases in size."

Impairment of the intellect does not depend exclusively on lesions of the front lobe, for according to the law of co-operation between the occipital and frontal, great impairments of the occipital

region would enfeeble the action of the intellect by taking away all the energy of the constitution.

Hitzig says that in protracted paralytic dementia there is always atrophy of the cerebral organs, and a very œdematous condition exists in the membranes of the brain, and "a great evolution of water is often found *over the parietal and occipital lobes*," while the frontal and temporal regions are "generally free or less affected." This evolution of water over the posterior regions of the brain in dementia he ascribes to atrophy of the brain substance. Hence it appears that atrophy of the posterior regions of the brain is a prominent cause of dementia, as we know also that a large development of these regions gives the mind great energy.

Irritations in the base of the brain have a very injurious influence upon the mind, and in like manner all diseases in the lower portion of the trunk are injurious to the brain. Many women continually suffer mental depression and impairment of memory from diseases of the womb. In my "Therapeutic Sarcognomy" the influence of various diseases upon the brain will be explained. Every active disease in any portion of the body gives us a demonstration of the laws of Sarcognomy.

The most perfect illustration of the effect of brain disease on the mental faculties is found in reference to the organ of language, because the faculty of speech is a matter that cannot be overlooked, while any amount of other mental or moral changes might pass unnoticed and unreported.

The triumphant vindication of Gall's discovery of the organ of language by the pathological researches of Bouillaud, Broca, Dax, Ferrier, Trousseau, Jaccoud, Hughlings Jackson, Falret, and others, and especially of late by Meynert, who has cited fifteen illustrations, is a remarkable example of the slow progress of pathological discovery in comparison with the bolder method of Gall. It was thirty-three years after the death of Gall that Broca announced the connection of aphasia with the locality in which Gall found the faculty of language—the inferior portion of the third frontal convolution. Even in animals without speech, as the monkey, Ferrier has shown that this locality in the brain is concerned in the movements of the lips and tongue.

But how feeble is the sense of justice in the learned professors, who seldom mention the name of the great discoverer. Is a bold departure from the doctrines of the Academy and colleges an unpardonable offence, that should deprive Gall of the honorable mention that is given to great physiologists and philosophers? an honor which he commanded in his lifetime by his force of character; and although it has taken so long a time to bring the entire profession to a cold-blooded recognition of his discovery, there were leading men of the profession in France, England, and Germany, who, during the life of Gall, recognized his discoveries; and it was three years before his death that Prof. Bouillaud published in the *Archives of Medicine*, vol. 8, his clinical researches demonstrating that the loss of speech corresponds with a lesion of the anterior lobes of the brain, and con-

firming the opinion of Gall as to the seat of the faculty of spoken language.

The intellectual organs of the front lobe are closely connected with the part just behind them in the middle lobe, which may be regarded as the summit of the spinal system, upon which the convolutions of the brain are superadded. This part, in which the ascending white spinal fibres are mixed with the softer, gray substance, acquires thereby a striped appearance, which gives it the name of *corpus striatum*, the striated or striped body, of which the plural is *corpora striata*.

From the *corpora striata* the fibres are prolonged into the front lobe, which brings the two parts into very intimate connection; and as the *corpora striata* are the headquarters of voluntary motion, the locality from which the commands of the will are sent to all parts of the body, it is necessary that they should be in the closest possible connection with the front lobes, in which the intellectual faculties conceive the ideas which guide the movements.

The lower intellectual organs, viz., the Sense of Force, Form, Size, Distance, and Weight, lying at the base of the front lobe, are the ones which have their fibres prolonged into the motor region of the *corpora striata*, and it is they which make it possible to execute any definite movement correctly. The higher intellectual organs have no such close connection. The portion of the striata thus connected with clear ideas of action and capable of commanding all the muscles, is called the nucleus caudatus, which is intimately connected with the lower posterior region of the cerebrum, and the other portion, which is the channel of Sensibility, and therefore connects with the organ of Sensibility, just above the cheek-bone, is called the lenticular nucleus, fibres from which may be traced to the organ of Sensibility. These two nuclei in the striata correspond with and are the continuation of the sensitive and motor columns of the spinal cord. These motor columns in the medulla oblongata (which is the commencement of the brain, where the spinal cord enters the cranium) take the name of pyramidal bodies, and are easily observed. They display conspicuously a crossing from one side to the other, which brings the right half of the brain into communication with the left half of the body, and the left half with the right, so that disease on one side of the brain may paralyze the opposite side of the body.

These pyramidal bodies or motor columns are increased in the brain by the addition of other fibres and gray substance, which supply the whole basilar surface of the brain, which is thus brought into communication with all the muscles, so that any excitement of the animal impulses rouses muscular action or makes us restless, and a strong excitement produces great muscular strength.

The sensitive columns, in passing into the brain, occupy at first a more posterior and exterior portion of the ascending mass, and in their ultimate relations have a more intimate sympathy with the anterior than the posterior organs, especially the anterior part of the spheno-temporal lobe. The most anterior relation of the sensitive system is that of the optic nerve, which, although rising from

the corpora quadrigemina (which are midway in the brain between the front and back in a line between the upper portion of the ears) is in the most intimate relation with the intellectual region. The sensitive system ascending from the spinal cord, and passing through the lenticular nucleus, has its full representation in the temples just above the cheek-bones, and this Sensibility, occupying the basis of the middle lobe, between the eye and the ear, appears to be the *basis of the emotional nature*, as the visual faculties are the basis of the intellectual.

This distinction between the intellectual faculties to which vision is tributary, the emotional faculties to which feeling is tributary, and the energetic executive faculties to which the motor nervous system is tributary, is an important element of the philosophy of the New Education. The intellectual faculties belong to the front, the emotional to the middle, and the executive to the posterior region



of the brain, where their basis is found in the medulla oblongata in a line between the ears. The posterior or occipital region is the largest, being equal to the other two, the middle, emotional, is the next, and the intellectual region the smallest. Yet our educational systems have been devoted exclusively to this *smallest region of the brain*, in a manner which often overtasks it instead of develop-

ing. The emotional nature, or elements of a good character, have been neglected, and the energies of character not only neglected but positively injured by suspending all active duties and labors.

The New Education develops the manly energies by an industrial and gymnastic training which insures success in business. It develops the emotional and moral nature, which insures an honorable and happy life, and it really develops the intellect by giving it practicality, freedom, and originality. It happily combines the intellectual and emotional faculties by means of music and voice exercises, addressed to the sense of hearing, which is intermediate between intelligence and feeling.

Each of these regions is intimately associated with the other. The muscular energies depend on the intellect for their guidance, without which they would be helpless; and this co-operation is secured by the motor fibres which pass from the medulla through the striata to the intellectual organs. They are also dependent on the upper emotional region, for disease in the upper emotional region produces paralysis and sometimes convulsions. This connection with the emotional region is illustrated by the anatomical fact that the fibres from the striata pass up to the emotional organs, making as close a connection with them as with the intellectual. The fibres of the emotional regions pass down into the motor columns, and a degeneration or destruction of substance in the emotional region produces a degeneration of fibres which may be traced down the spinal cord.

These pathological facts, which have long been known, and illustrated in more than a thousand cases, are entirely foreign to the Gallian system of Phrenology; and the devotees of the old system,

who with parrot-like monotony have continued to teach the doctrines of Gall, unconscious of modern progress, have never attempted to explain the variance between the old theory and the facts.

That which has long been shown by pathology, in its thousand autopsies, has been still more decisively shown in the experiments of Ferrier, Fritsch, Hitzig, and others on the brains of animals nearest to man. They have demonstrated a psycho-motor region in the upper surfaces of the brain by means of which they irritate the muscular system, and by the destruction of which they produce a temporary paralysis. Of all this the old Phrenology knew nothing, and for these facts had no explanation. The new Anthropology takes cognizance of all the facts that anatomy, pathology, and vivisection have developed, and shows how injuries of the upper surface produce paralysis, though not as complete as may be produced through the striata, in which the section of a few fibres from the nucleus caudatus produces total paralysis.

It shows also how the occipital co-operate with the frontal organs, as illustrated in Chap. XVI. — Region of Understanding — which shows that the frontal organs depend on the occipital for their power. The most extreme illustration of this by vivisection experiments is the showing that vision is largely dependent on the lateral inferior region of the occiput, by injury of which blindness may be produced. Such physiological facts are quite puzzling to the old-fashioned phrenologist.

The comprehensive truth of cerebral science is that the brain is a physiological as well as psychic organ, and that it is as impossible for the old Phrenology to explain its action by considering it merely as a psychic organ, as it is for modern physiologists to explain it by experiments on animals to ascertain physiological action, which can be seen, without any reference to the psychic. The psycho-physiological operations of the brain must be studied as a whole, in connection with its anatomy, and also in connection with the corresponding physiological and psychic action in the body, which constitutes the science of Sarcognomy.

Students of nature and sincere lovers of wisdom (who are not a large class) are not content with any of the limited and partial views of science and philosophy which they obtain from teachers.

The fragmentary illustrations of the constitution of man which are obtainable from physiologists, phrenologists, and speculative philosophizers are not Anthropology, as the fragmentary glimpses of religion obtainable through any sect are not the religion of the future.

There cannot possibly be either a true Anthropology, or a true system of philosophy, which is not based upon a correct knowledge of the psychic elements of human nature, and their association with the brain and body. Nor can that complete knowledge be attained in any other way than by the experimental investigation of the brain. But, self-evident as this appears, the universities do not appear to be conscious of its truth and importance, while they adhere to old forms of barren speculation, and neglect the science of the brain.

Miscellaneous.

A FAMILIAR TALK TO READERS. — This number ends the second volume of the JOURNAL OF MAN. I have endeavored as far as possible in its cramped limits to present that which the good and the wise desire. The good man desires to know what can be done, and what is doing, to make the world better, and what is its actual condition. The wise man desires to know how much of truth there may be in the opinions, notions, and philosophies that are current, and what newer, profounder, truer views of life and progress may be gained by original researches such as those to which I have given half a century, which are expressed by the word ANTHROPOLOGY. It has been impossible to give all this in a small magazine, and I have been compelled to omit from each number a large amount of cotemporary intelligence, science, and philosophy which ought to have been given to my readers. Even the enlarged Journal will still be inadequate, and will require great condensation to treat its numerous themes. This will make the Journal of each year a volume of permanent value for the library, indispensable to those who wish the best thought and knowledge of the century, unencumbered by the verbosity that is so common. This is a time of wonderful and increasing intellectual progress in both psychic and physical science, and in the February number I shall begin a short review of the foremost conditions of science, philosophy, and art.

What I have done seems to be generously appreciated by readers, and Prof. Blake, in the *Kansas Farmer*, has given the following kindly comments on the JOURNAL OF MAN.

“One of the most interesting publications among our exchanges is *Buchanan's Journal of Man*.

“Probably Dr. Buchanan has carried the science of Phrenology farther than any man who has ever lived. His explanation of the functions of the various parts of the brain, and his discussions of the relations between mind and its organ, the brain, are highly interesting to those who have studied such questions. We read his works nearly forty years ago and therefrom obtained many ideas which have been of great value to us in our life-work among the stars, for all sciences are but links in one great chain. The Doctor is now quite an old man; but his writings are more interesting than ever before. Added to natural ability of a high order, age and experience have given to his present writings a richness, ripeness, and solidity not to be found in ordinary journals. He discusses all of the live topics of an advanced nature, and easily pricks the bubbles which hold thin air. While his writings are a rich treat to advanced thinkers, they would not be fully appreciated by those who have not looked beneath the surface.”

Men who do not understand the science of life wear out so fast that the word *old* conveys an idea of the downhill of life, dim eyes, feeble limbs, and a stooping form. True philosophy repudiates all that; and now, beginning the seventy-fifth year, I feel as competent as ever for all the duties and pleasures of life; and as the tasks in

which I am interested require another half century for their completion, I feel the necessity of making every day count; and asking the co-operation of all the good — asking each subscriber to find another if possible, and also to send in his letter the names and addresses of such of his acquaintance as might be interested, by sending a specimen number, to become permanent subscribers to the enlarged Journal.

ANTHROPOLOGY. — Let no reader be deterred by unfamiliarity with anatomical terms from carefully reading the exposition of the mysteries of the brain in this number, — an exposition which has never before been published, and is new to all scientists. As for technical terms, the corpus striatum, or striped body, lies in the interior of the brain, above the cheek-bones and ear, and connecting downwards with the spinal cord, but upwards with the intellectual and emotional organs. The optic thalamus is just behind the corpus striatum, and is connected with the higher and posterior development of the brain. Hemiplegia means half paralysis — paralysis of one side of the body, because the opposite side of the brain is diseased. The occiput means the hinder part of the brain or head. Amaurosis means impairment of vision. Coma means unconsciousness and stupefaction; autopsy, dissection of a dead body; cicatrice, the mark of a healed wound; corpus callosum, the nervous substance that unites the two hemispheres of the brain; dura mater, the membrane between the brain and skull; Primates, the higher order of animals; dementia, loss of mind; atrophy, wasting of substance; parietal, at the side of the head above the ears, including the upper surface; nucleus caudatus, the motor portion of the corpora striata; lenticular nucleus, the sensitive portion of the corpora striata. The few anatomical technicals we are compelled to use are nothing to the etymological compounds of chemistry, the latest of which is the fully developed scientific name of antipyrin, viz., dimethyloxyquimzini. The chemical name of cocaine contains fifty-four letters, being Methylbenzoinethoxyethyltetrahydropyridinecarboxylate!

PROPHECIES — Are not in great demand before the time of the event prophesied; but successful prophecies are highly appreciated, such as Prof. Blake's prophecies of the weather. In our next issue will be published a remarkable prophecy concerning Cleveland and Harrison.

PSYCHICAL RESEARCH. — This Society met on the 13th in Boston. Prof. WM. JAMES presided. If the society were entirely composed of such men as Prof. James, it would accomplish a useful work, but at present it appears a very slow coach. The people who are speculating to-day on psychic questions are in the great majority of cases following either a blind, stubborn, and stupid scepticism, or an equally blind and imbecile credulity, or a desperate determination to solve all the problems by intense thinking, without looking for facts; which is about as rational as to attempt ascending on a mountain by lifting at your bootstraps. Of the latter style of operation we have a good example in the *Open Court* of Chicago, which *positively knows* that there is no soul and no possible immortality, because the

editor is conscious of nothing in him but successive states of consciousness — an argument which would be equally available to prove that he had no body! However, people who are not muddled in mind by excessive speculation are conscious of both soul and body. And those who are not dominated by college authority or by animalism are willing to settle such questions by getting the facts.

SOUTH AMERICAN PROGRESS. — Consul Manton, of Uruguay, says that Brazil is ripe for a republic as soon as Dom Pedro dies. Uruguay is prosperous, and the ARGENTINE REPUBLIC is "the wonder of the world." It has five millions of population and receives 500,000 immigrants annually. "Towns spring up by magic. We have built a city of 75,000 inhabitants in less than four years." They have telephones better and cheaper than in the United States. Paraguay is beginning to recover. It has an immense surplus of women, its male population having been largely destroyed in the war with Brazil. The wonder is that so small a country, with less than 400,000 population, should engage in war with the ten millions of Brazil. Uruguay is not much larger. All South America ought to be one federal republic. It has territory enough to sustain a population of sixteen hundred millions, but has only about 30,000,000 at present. The Roman Catholic church is its chief drawback. Even the Argentine Republic requires its President and Vice-President to be Roman Catholics.

THE SPIRITUAL BODY. — A Western correspondent, who recognizes that all the powers of the soul are exercised through the brain, asks, "If the spirit or soul lives or exists after the death or destruction of the body, through what organism or cerebation does it then manifest itself?" It is a sufficient answer to say that all enlightened pneumatologists recognize the existence of a spiritual body after the destruction of the material body, which corresponds with it in all respects and is even capable of becoming reinvested with matter. In such a spiritual body there is of course a spiritual brain, the same spiritual brain, of course, which we use in life, divested of its material surroundings. What is the composition or nature of that spiritual body, is beyond the cognizance of science, and it is not profitable to indulge the imagination as many do concerning matters of which we have no valuable knowledge.

POSITION OF THE CATHOLIC CHURCH. — Charles Roys, LL. D., states in the *Peabody Reporter* that he listened to a Catholic sermon delivered at Washington in 1877, by Rev. Father White, an eminent Jesuit who once held a discussion with Bishop Newman. The extreme frankness of this Jesuit is rather startling. Mr. Roys says: "We were early and got a good seat directly in front of the speaker, and quite near, and we could hear every word. I supposed that he would deny that indulgences were ever sold with the knowledge and approbation of the Romish Church, but in this I had reckoned without my host. He commenced by quoting passages from the New Testament, showing that Christ had given to Peter the keys of heaven and hell; and he asserted that the language used by Christ on that occasion demonstrated unmistakably that the R. C. Church was ever thereafter to have the power of saying who should enter heaven, and who should not. Next he said that it was very clear that, if the Church could say who should enter, it could say on what terms they should

enter! Then he quoted more Scripture and tradition and the 'Fathers' to show that the church had in the earliest times believed this doctrine and had put it in practice. Then he went on treating the sale of indulgences as a well-established historical fact, and thoroughly recognized and approved by all good Papists. It was an easy glide from 'Indulgences' to the 'Inquisition.' The same texts of scripture, the same quotations from the 'Fathers,' and the same tradition for both! The 'Inquisition' was fully recognized as the natural outgrowth and ally of the R. C. Church. 'But it may be asked,' said he, 'why the church does not make use of the 'Inquisition' now; for if it was right then it must be right now.' 'I answer,' said he, 'that the church has a *right* now to use the tortures of the 'Inquisition' upon heretics and infidels; but we are restrained, as I may say, by the force of circumstances'

"The doubts of my youth were dispelled! Here I heard an *official* declaration that the church of Rome only wants the *power* to bring out her instruments of torture, and she will put every Protestant and infidel upon the rack as of old. Let the R. C. Church come into power, and she will muzzle the *press*, stamp out the common school system, enslave the whole human race, turn men once more into savages, and torture as fiendishly as of yore.

"The reader may desire to know how the Rev. Father's endorsement of the Indulgences and Inquisition affected my liberal Catholic friend. He was astounded and declared 'Those d—d priests would drench this whole country in blood if they had a chance.' He realized fully that his liberty was as much in danger as mine. Let all men bear in mind that 'Eternal vigilance is the price of liberty.'"

RELIGION AND THEOLOGY.—In a sermon on "Church and State," recently delivered in the Roman Catholic Cathedral in Boston, the Rev. Father Nagle said, "The church and State go side by side, each holding on to what has been given it by God. But if ever we should have any unhappy conflict between the church of God and the government under which we live, then, indeed, as Catholics, there would be no hesitation in taking up arms against the State and in favor of the Church, for we must obey God rather than man." On the other hand, a large number of Catholics in New York sympathize with Rev. Dr. McGlynn in denying the authority of the Pope or the church to interfere with American politics. This Catholic movement shows a surprising amount of energy and independence.

What a wonderful change since Quakers were hung in Boston, and even in the last fifty years. The time was when any dissent from the church resulted in ostracism, but now the leading dailies of the great cities criticize the church with a freedom which would have excited horror early in the century. In England Mr. Balfour, the new Irish secretary, is practically as much of an infidel as Bradlaugh, though he has not the manliness or philanthropy of Bradlaugh in propagating his opinions.

THERE have been more Catholic churches, schools, convents, hospitals, and colleges erected in Tennessee, Alabama, and Arkansas during the past two years than during a decade prior to that time.

RELIGIOUS PROGRESS.—The battle of Andover Seminary is over, and the heathen are not to be sent to hell so peremptorily as before.

The *Boston Herald* says: "There is almost a dead calm after the storm, and the fact that awaits one who looks for it is that the Congregational body is not aware that it has changed its position. What it has done by

an almost unanimous consent is to dismiss the doctrine of eternal and absolute damnation to its theological lumber-room. But when this is done, one of the most sanguinary motives to impel persons to live a godly life has been taken away. The positive part of religion still remains, but the old formularies no longer serve. The old doctrines of sin and of the character of the expiation of the Master upon the cross are changed, and the Congregationalists are drifting out to sea in ships that have neither captains nor compasses. The Andover Seminary may be trusted to do good work, because its faculty are sterling and honest men, but neither the Andover leaders nor the bone and sinew of the denomination seem to be aware that the Congregational congregation has changed its base, and is without conscious direction. They know that the theological views have been essentially modified, but they do not know where the new departure makes lines of demarcation from the old faith. Ethically, the denomination, or the advanced portion of it, stands on the plan of the treatment of the religious life which is well known in the Roman Catholic and Anglican communions, but few of the Congregationalists are sufficiently acquainted with historical Christianity to know what that means. What is implied, in point of fact, is that the special rigmarole concerning the fashioning of the spiritual life has passed away, and that the people are taking their rations out of the New Testament without the qualifications once imposed by the traditional theology."

RAILROAD PROGRESS.—A railroad is to be built from Constantinople to the Euphrates, 1400 miles long. The Sultan has granted the privilege to a rich syndicate. Persia is building a railroad from Teheran to the Caspian Sea, 200 miles. The British government will soon have a railroad from Calcutta through Beloochistan to Candahar, nearly one-fourth of the way across Afghanistan through a mountainous region. The Emperor of Siam has permitted a railroad across his kingdom, and Russia is running its railroad across Siberia. Even Africa is to be penetrated by a railroad from Loando, West Africa, 400 miles toward the centre of the continent.

POLITICAL CORRUPTION is bad enough in America, but it is consoling to see how much worse it is abroad. The English *Railway Press* says:—

"Few of the outside public can have any idea of the enormous cost of getting a railway bill through Parliament.

"The Parliamentary, surveying, and engineering costs of the Kendal and Windermere Company amounted to a trifle over two per cent. on the whole expenditure on the line. Of Parliamentary costs the Brighton Railway averaged £4,806 per mile; Manchester and Birmingham, £5,190; Blackwall, £14,414. These figures are almost beyond belief, when we consider that some English lines in favorable positions cost altogether only £10,000 per mile. The Brighton line for two sessions fought a desperate battle against several other companies, and when its bill came before the committee, the expenses of counsel and witnesses amounted to over £1,000 a day, and the discussion of the measure lasted fifty days!

"The solicitor's bill of the Southeastern Railway contained 10,000 folios, occupying twelve months in taxation, and amounted to £240,000! One company found such difficulty in getting their bill through its preliminary stages, that at last, when they had reached the long-desired last stage, they had already spent nearly a million of money, and this simply for obtaining the privilege of making the railway. Of the terrible costs which have been incurred only to lead to ultimate failure, one instance will be sufficient. The discussion upon the Stone and Rugby bill lasted sixty-six sitting days from February till August, 1839; and in the year 1840 the meas-

ure was defeated, after having resulted in a loss of £146,000 to its unhappy promoters.

"It is needless to say that such enormous expenditure cripples many a railway, and prevents its shareholders from ever earning good dividends. The ceaseless energy, untiring perseverance, and neat diplomacy which have to be shown in pushing a railway bill to a successful issue are almost beyond belief; but it is much to be desired that some means should be discovered of keeping down the expenses which so often go far to ruin a line even before it has begun working."

FEMALE EDUCATION. — Columbia College, New York, is yielding like Harvard to women's demands, which have been urged ever since 1876. The trustees were begged to do something in 1876 and in 1879, and in 1882 a petition with fifteen hundred names was presented, signed by many leading citizens. But President Barnard and Bishop Potter "consigned it to oblivion!" Was there ever a college which was not a stronghold of old fogyism? It is pitiable to think that the mind of woman is to be subjected to the influences of college bigotry. How much better it would have been to make a separate institution for women!

Now the women have formed an association to establish a woman's college in connection with Columbia. The trustees have agreed to permit this, but *not to give it any financial support*. The professors and course of teaching are to be the same as in Columbia College, and this women's annex will have to pay the Columbia Faculty for their services. Money has been raised, and operations will begin in 1889.

THE WELSH QUESTION IN ENGLAND. — Scotland and Wales are clamoring for local justice as well as Ireland. A "Welsh National Council" has been organized. They say that "Wales is a nation; and entitled to such legislation as may be called for by the deliberate voice of its representatives." They demand the abolition of the oppressive English Church establishment and the tithes they are compelled to pay to a church they do not attend. Two thirds of their people use the Welsh language, but they are forced to learn English. Their educational system is impoverished, and they have, no equal opportunities with other portions of Great Britain. As to land they have the same difficulties with English landlords as the Irish, and they call for protection from Parliament. In addition to disestablishment, educational reform, and land reform, the most earnest Welshmen want home rule and a Welsh Parliament. These views are advocated by Mr. Ellis, their member in Parliament.

THE COPPER TRUST. — The *New York Evening Post* says, "The impudence of the copper syndicate passes all bounds. They have now taken contracts with all the American companies for their supply for ten or twelve years, for the purpose of restricting production and putting up or holding up the price of a necessary article of modern civilization. We advise them to have a care. When the particulars of the English salt trust became matters of public notoriety a few weeks ago, the London *Economist*, the organ and mouthpiece of conservatism in British finance, declared bluntly that Parliament would not allow any portion of the soil of Great Britain to be monopolized to the injury of society. It reminded these salt monopolists that land titles in the United Kingdom had been inquired into, and contracts respecting the use of land set aside for less reason than appeared to exist for inquiring into the uses of the Chester salt mines."

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